



SERVICE BULLETIN

From Advanced Electronics Applications

ATTENTION

Before getting started with the program or operating manual, be sure to read the README batch file on your PC-Pakratt-88 diskette.

To do this, first put either the 5-1/4" diskette marked **PC- Pakratt-88** in your 5-1/4" drive, or put the 3-1/2" diskette in your 3-1/2" drive.

Make sure the drive you put the diskette in is active (if you put it in the **A** drive, be sure the DOS prompt on the screen is **A:** or **A>**). Now, type:

README

and press the ENTER key. The screen will fill up with notes about the latest release of PC-Pakratt-88. Once the notes have filled up the entire screen, a message will appear at the bottom of the screen prompting you to

Strike a key when ready . . .

Once you are done reading the screen, press any key to bring up the next screen. This same process will be repeated for the entire file.

To get a hard copy of the notes on the printer which is attached to the computer, first make sure the printer is on-line and then type

TYPE README.DOC>PRN

at the DOS prompt. This is not the same file that prints on the screen when you type README. If you attempt to print the README.BAT file, you will have batch commands throughout the print.

The information contained in the README file pre-empts any conflicting information in the PC-Pakratt-88 Operating Manual.



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PC-PAKRATT-88

| Communications Menu |

PACKET Screen
Dumb Terminal
Setup Screens
Change Colours
Files Menu
PcPakratt Parameters
Shell to DOS
Call Editor
Exit Program

Advanced Electronic Applications, Inc.

PC-PAKRATT-88
Host Mode Terminal Program
for the
PK-88 and PCB-88

OPERATING MANUAL

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1. Introduction

What is PC-Pakratt-88 ?

PC-Pakratt-88 is a terminal program designed for AEA's PK or PCB-88™. PC-Pakratt-88 requires an IBM PC or clone with at least 256K of memory, a monochrome or color adapter, and a serial port. You must be running MS-DOS 3.0 or later. PC-Pakratt-88 also runs under OS/2 in the DOS compatibility box. PC-Pakratt-88 supports communications ports 1 through 4. PC-Pakratt-88 can take advantage of the 43 line mode of an EGA or VGA adapter, allowing for more information to be displayed on the screen. PC-Pakratt-88 also supports a Microsoft© compatible mouse.

Why use PC-Pakratt-88 ?

PC-Pakratt-88 operates the PK/PCB-88 in host mode to provide a more effective means of communication between the host computer and the PAKRATT. PC-Pakratt-88 is a window oriented program; the Operating Screen is divided into 3 different windows. Data that is received is shown in the Receive Window. Below the Receive Window is the Transmit Window where the characters you type are displayed. The bottom window, the Status Window, keeps track of the condition of the data link, as well as current communications information.

Many of the PK/PCB-88's commands have been assigned to function keys. This feature allows you to make a Packet connect, for instance, with one touch of a function key. PC-Pakratt-88 also features keyboard macros. Keyboard macros are text strings that are assigned to a particular keystroke and are sent when that keystroke is typed. For example, the message "CQ CQ CQ CQ CQ DE KD4JP" can be sent with a single keystroke like ALT-1.

Virtually everything that can be done with the keyboard can also be done with a mouse. The mouse makes it easier to navigate around PC-Pakratt-88's menu system. Most menus have 'Hot Keys', keys which will execute a particular item in the menu.

There are two different setup screens that allow you to set the multitude of parameters without having to remember the syntax of each command. The default values for these parameters are stored in a file so the PK/PCB-88 can be initialized to your specific configuration. Different parameter files can also be created allowing for different operating conditions using a different set of parameters.

PC-Pakratt-88 also allows files to be sent (uploaded) to other stations and information being received to be saved to a file (downloaded). PC-Pakratt-88 has note files, files that can be used to store operating frequencies, names, calls, or whatever. The files can be viewed while operating.

PC-Pakratt-88 has message files to store text that is frequently transmitted. PC-Pakratt-88 allows you to search for specific text strings within the file being viewed.

Files can be viewed or edited from within PC-Pakratt-88. PC-Pakratt-88 has its own editor (see chapter 12) but also allows you to specify your own favorite editor to edit files. PC-Pakratt-88's file viewing function allows you to view files while operating.

PC-Pakratt-88 also has a 900 line scroll back buffer. You can page up and down within this buffer as well as search for specific text strings contained in the buffer. This size of the buffer is adjustable.

PC-Pakratt-88 also supports the maildrop feature of the PK-88. PC-Pakratt-88 can save and restore those mail messages stored in the PAK-RATT. With this feature enabled, maildrop messages will not be lost when powering down the PK/PCB-88 or leaving PC-Pakratt-88.

PC-Pakratt-88 has a built-in, YAPP compatible file transfer facility (see chapter 9), but also allows you to call your favorite external program to handle binary file transfers (see chapter 10).

Upgrading from PC-Pakratt

There is **no** backward compatibility to the original version of PC-Pakratt (version 1.06). Any macros and message files used with PC-Pakratt will have to be recreated for PC-Pakratt-88. You may wish to create a new sub-directory for PC-Pakratt-88 so as to keep your PC-Pakratt files for reference. Since PC-Pakratt-88 is started with the command PP88, you may keep the batch files used for the original PC-Pakratt.

When PC-Pakratt-88 is starting up, the program will read the release date of the firmware in the PK/PCB-88 and display the results in the upper right corner of the initialization screen.

Program Requirements

This manual assumes a working knowledge of the PK/PCB-88 and its commands as well as Microsoft's DOS 3.x or higher. DOS 3.x or higher is required because previous versions of DOS do not allow the size of the DOS environment table to be changed. PC-Pakratt-88 uses the environment table to specify the time zone information. If you use the DOS environment to specify a long PATH string and/or use the DOS environment to set other information, the environment may not be large enough to handle the extra information PC-Pakratt-88 requires. The default size of the DOS environment is 128 bytes. Changing the size of the environment will be discussed in Chapter 2. PC-Pakratt-88 has been tested and found to be compatible with MS-DOS version 5.0.

If you have an IBM PS/2 Model 50Z and it was manufactured before September 1988, it may be in need of a new System Control board. Contact your IBM Dealer. PS/2 and IBM are trademarks of International Business Machines Corporation.

Some customers have reported problems with PC-Pakratt-88 when used on Leading Edge machines with a BIOS version lower than 3.00. A Leading Edge model D computer may need a BIOS version of 3.00 or later to work with PC-Pakratt-88.

PC-Pakratt-88 uses the DOS EXEC and SHELL functions. These functions do not always work properly in DOS 2.1 because of a bug in DOS. This does not mean PC-Pakratt-88 will not run, but the potential for the system to crash is there. This bug has been fixed in later versions of DOS.

PC-Pakratt-88 will run with a minimum of 256K of RAM. More memory may be required if your editor has significant memory requirements.

PC-Pakratt-88 supports the latest ROM revisions (August 1991) for the PK/PCB-88, including the Packet Lite™ features. If you have an older version of the ROM set, some features of PC-Pakratt-88 will not work with your PK/PCB-88. This is not a catastrophic problem but PC-Pakratt-88 will report an "Unknown Command" error if you attempt to use a command or set a parameter not supported by your PK/PCB-88. These "Unknown Command" errors can be disabled from the "PC-Pakratt-88 Parameters" menu.

Note that whenever a conflict occurs between the PK/PCB-88 Operating Manual and this manual, the information in this manual will take precedence.

PC-Pakratt-88 requires pins 2, 3, 4 and 7 be connected in your RS-232 interface cable. A standard "modem" cable is sufficient. Do not use any pins other than 1 through 8 and 20, such as a 25 wire RS-232 cable.

Windows 3.0 Application Notes

PC-Pakratt-88 has been found to behave itself when run under Windows 3.0 under the following conditions:

- Windows must run in the 386 Enhanced Mode. We have had no experience running PC-Pakratt-88 in the "Real" or "Standard" modes of Windows.
- PC-Pakratt-88 can run as a window. When creating your PIF file, make sure that the box labeled "Background" under "Execution" has been checked and that there is an "X" in the box.

Windows is a trademark of Microsoft Corp. and 386 is a trademark of Intel Corp.

Getting the PK-88 or PCB-88 ready

The lithium battery in the PK/PCB-88 should be enabled. This is the way it is set from the factory, so if you haven't changed anything, the battery should be enabled.

JP6 on the PK-88 circuit board (JP1 on the PCB-88) controls battery power; if the shorting plug is on both pins of the jumper, the battery is enabled. PC-Pakratt-88 saves all the default parameters in a file and will initialize the PK/PCB-88 each time it is run. The lithium (if you have an older unit, the AA cell) battery is not really necessary. If you decide to leave the batteries in, you should RESET the PK/PCB-88 before running PC-Pakratt-88 for the 1st time. Also, any other programs used with the PK/PCB-88 should be set for the same COM port baud rate as PC-Pakratt-88, and should be set for 8 bits/no parity.

Acknowledgments

PC-Pakratt-88 was written by Dick Lichtel, KD4JP, using Microsoft™ C© 6.0 and the Microsoft Macro Assembler© 5.1. This manual was also written by Dick Lichtel, KD4JP.

Special acknowledgements go to Dave McKee, N0IKU, whose support, encouragement, suggestions, and amazing ability to attempt the bizarre kept PakTerm (PC-Pakratt-88) going. Appreciation is also extended to Ray Liles, WA4VME, and Dyer Matlock, N4PZM for their help and ideas.

Please be sure to return your warranty card, as we will use that information to keep you informed of updates as they become available.

2. Program Setup

Running With a Floppy Drive

To install PC-Pakratt-88 on a floppy simply copy the following files to a formatted floppy:

- Disk 1 of 2:
PP88.EXE (the main program)
HELP88.FIL (help database file for PC-Pakratt-88)
- Disk 2 of 2:
PKEDIT.EXE (the editor program)
PKEDIT.HLP (the editor help file)

If you have a 3.5" system, all four files are contained on one disk. Keep the original disks in a safe place. Do not use the original disks to run the program. Use them only to copy from.

Running With a Hard Disk Drive

To install PC-Pakratt-88 on a hard disk, first create a subdirectory called PCRATT88 (the directory can actually be called anything you want). Move to the subdirectory you created using the CD command (e.g. CD \PCRATT88). Now copy the files PP88.EXE and HELP88.FIL from the PC-Pakratt-88 disk 1 of 2 and the PKEDIT.EXE and PKEDIT.HLP to this directory.

What File Does What

When run, PC-Pakratt-88 will create the following files as needed:

- PK88DEF_.CFG (Configuration File)
- PK88DEF_.DEF (Default Parameter File)
- PKMES.1 thru PKMES.5 (Message Files)
- PK.MAC (Default Macro File)
- PK.LOG (Default Capture File)
- PKNOTE.1 & PKNOTE.2 (Note Files)
- PKMAIL.MES (Maildrop File)
- PKAUTO.CON (Autoconnect File)

All these files should exist in the same subdirectory and on the same drive as PP88.EXE.

Modifying the DOS CONFIG.SYS and AUTOEXEC.BAT Files

You also need to change or create the file CONFIG.SYS. Your CONFIG.SYS file should contain the following statements:

BUFFERS=30 (if you don't have a hard disk set **BUFFERS=3**)
FILES=15 (or greater)

CONFIG.SYS must reside in the root directory of your boot disk.

If you get the DOS error OUT OF ENVIRONMENT SPACE, add the line:

SHELL=C:\COMMAND.COM /P /E:256

to your CONFIG.SYS file to increase the environment space. You must have DOS 3.x to use the /E switch on the SHELL command. See your DOS manual for more information.

If you wish to have PC-Pakratt-88 display local and UTC time, your AUTOEXEC.BAT file also needs to be changed. At the beginning of the file, add a line using the DOS "SET" command for the time zone you live in. If you are in the Eastern Time zone, for example, use

SET TZ=EST5EDT

This sets the time zone information to Eastern Standard Time, 5 hours after UTC and Daylight Savings Time is used in the area. If you live in California, then SET TZ=PST8PDT. If your area does not use daylight saving at all, leave off the EDT (i.e. SET TZ=EST5). If your area does use Daylight Savings even though it is not in effect presently, EDT MUST be specified.

Remember to set the date and time on your computer before running PC-Pakratt-88 ! If you do not SET TZ to anything, the default will be PST8PDT. If your time is ahead of GMT, the value you specify is negative, i.e. if your local time is 1 hour ahead of GMT time, use -1. See your the SET command in your DOS manual for more details.

If you have DOS 3.3 or later, you may wish to install the FASTOPEN utility. If you have a disk cache utility, you should also install it. If you use a disk cache utility, you may want to reduce the number of buffers specified in your CONFIG.SYS file to save memory. Consult your disk cache utility documentation for the proper value to set BUFFERS.

PK-88 Preparation

Before running PC-Pakratt-88 for the first time, turn the PK/PCB-88 off. Wait a few seconds before turning it back on to be sure the PK/PCB-88 has been reset. If the PK/PCB-88 was used with another program and the battery back-up was enabled, PC-Pakratt-88 may not be able to initialize the PK/PCB-88 (The TBAUD parameter must be set to 9600 if you don't reset the PK/PCB-88).

This completes the setup operation.

3. Running PC-Pakratt-88

PC-Pakratt-88 Options

To execute PC-Pakratt-88, first move to the drive and directory where PC-Pakratt-88 resides then type PP88. PP88 has eleven switches (command line options) available; -B, -D, -H, -M, -N, -F, -I, -BW, -COLOR, -PACKET and -[COMPORT]. At the DOS prompt (A, A:\, C, C:\PCRATT88\, etc.) you would type:

PP -H -[M or N] -D -[F or I] -[BW or COLOR] -B[####] -PACKET -COM[#]

The -B switch sets the baud rate between the PK/PCB-88 and your computer. #### is the baud rate and can be 1200, 2400, 4800 or 9600. PC-Pakratt-88 defaults to 9600. This switch overrides the default value stored in PK88DEF_.CFG. Changing the baud rate from within PC-Pakratt-88 is discussed in chapter 8. The [] around the -B switch means the -B is optional. Do not type the [] on the command line or PC-Pakratt-88 will not recognize the -B option

The -D switch prevents (disables) PC-Pakratt-88 from sending a RESTART command to the PK/PCB-88. The RESTART command allows PC-Pakratt-88 to set the PK/PCB-88's PARITY and AWLEN parameters. Unfortunately, this command also erases anything in the PK/PCB-88's receive buffer. By using the -D switch, receive buffer information stored in the PK/PCB-88 can be preserved. Thus, with the -D switch, you can leave your computer off and your PK/PCB-88 running and at a later time, load PC-Pakratt-88 and read the receive buffer.

The -H switch puts your EGA screen in the 43 line mode and your VGA screen in the 50 line mode. The default is 25 lines.

The -M switch enables the saving and restoring of maildrop messages. If the firmware in your PK/PCB-88 is dated 1990 or later, this option is not needed. The file PKMAIL.MES will be read if found and the messages stored in this file will be restored to the PK/PCB-88. When exiting PC-Pakratt-88, maildrop messages will also be stored in this file. The -N switch disables the saving and restoring of maildrop messages. The -N and -M switches should not be used together. If both -N and -M are specified, the switch which is last on the command line will take precedence. The -N and -M switches override PC-Pakratt-88's default settings for the restoration of maildrop messages. The saving and restoration of maildrop messages is discussed in chapters 8 and 10.

The -F and -I switches control initialization of the PK/PCB-88. The -F switch forces Fast Initialization if the PK/PCB-88 is still in the host mode. The -I switch forces full parameter upload to the PK/PCB-88 regardless of

the host mode setting. This option can also be controlled from the PC-Pakratt-88 Parameter Menu (see chapter 8).

The -BW switch force the program to come up in black-and-white. This may be desirable if using it with a laptop computer with a CGA screen. This option may also be controlled from the PC-Pakratt-88 Paramter Menu (see chapter 8).

The -PACKET switch forces PC-Pakratt-88 to come up in the Packet mode, bypassing the Communication Menu. So, by typing "PP88 -PACKET", PC-Pakratt-88 will bypass the opening menu and come up in the packet screen. If this switch is not used, PC-Pakratt-88 will come up to the opening menu.

The -COM[#] switch specifies a COM port different from the one specified and stored in PK88DEF_.CFG. The choices are COM1, COM2, COM3 or COM4. For instance, by typing "PP88 -COM2", the program will attempt to initialize the PK/PCB-88 through COM port 2. If this switch is not used, PC-Pakratt-88 will use the COM port which was chosen the first time the program was run.

Choosing a COM Port

When first run, PC-Pakratt-88 will prompt for a communications port #. Move the cursor to the proper communications port and press RETURN. Com Ports 1 - 4 are supported. If you have a mouse, the mouse cursor will be shown. Click the left button on the proper communications port # that is to be used. You can also press one of the 'Hot Keys'.

After choosing a COM port, you will be prompted for port address and IRQ #. The default values for the port address and IRQ number are common in many IBM PC compatible machines. Do not change these unless you know what your machine requires or if you cannot get PC-Pakratt-88 to run on the COM port you have chosen. If all else fails, use COM 1 or COM 2.

PC-Pakratt-88 then creates a file called PK88DEF_.CFG in which the configuration information is saved. Once created, these values will be read in by PC-Pakratt-88 from this file each time PC-Pakratt-88 is run. You will be prompted for the communications port information only if the file PK88DEF_.CFG does not exist. The information stored in PK88DEF_.CFG ranges from the screen colors for the various types of menus to the communications port information. The names of the default text editor and default file transfer program are also stored in this file.

COM Port Caveats

COM ports can be different things to different people, and usually mean different things to different machines. Especially when dealing with COM3 and COM4. These ports have different addresses depending upon the board used. The PC-Pakratt-88 gives you the option of changing the COM port address and IRQ number after choosing a port. Try the default values first; they have been found to be the most common addresses and IRQs for the port selected. If the PK or PCB-88 doesn't initialize after making these settings, you may wish to delete the PK88DEF_.CFG file and run the program again, choosing a different port address and IRQ number.

The default values are:

| Port | IRQ | Port Address |
|------|-----|--------------|
| COM1 | 4 | 3F8 |
| COM2 | 3 | 2F8 |
| COM3 | 4 | 3E8 |
| COM4 | 3 | 2E8 |

IRQ is the hardware interrupt line used, and the port address is the physical address of the port. Some COM boards use port addresses 3F8 and 2F8 for COM3 and COM4 respectively but use IRQ 5 instead. We have noticed this on AT type COM boards. If you are confused, check your COM board documentation.

If you are still confused, your best bet is to use COM1 or COM2.

Setting the Baud Rate

After the communications port is chosen, and the port address and IRQ # have been selected, you will then be prompted for the baud rate (between the computer and the PK/PCB-88). The menu will look something like this:

| |
|-----------------|
| Enter BAUD Rate |
| 1200 |
| 2400 |
| 4800 |
| 9600 |

If you are running OS/2 you should choose 4800 baud. Otherwise 9600 baud will give you the best performance. As with the COM Port menu, you can use the cursor keys, your mouse or the 'Hot Keys' to choose the baud rate.

Up And Running

PC-Pakratt-88 will display the PC-Pakratt-88 logo and introduction. To initiate communications with the PK-88 press a key. If the PK/PCB-88 has been previously powered on, Pakratt will abort if the baud rate of the PK/PCB-88 does not match what PC-Pakratt-88 thinks the baud rate is.

Initializing the PK-88

PC-Pakratt-88 will initialize the PK/PCB-88's parameters using the values stored in the file PK88DEF_.DEF. These parameters can be changed later on from the Setup Screens. A window will appear on the screen and the PK/PCB-88's parameters are shown in the window as they are initialized.

Handling Initialization Error Messages

Since some parameters such as MYCALL may have not yet been set, an Error Message will be displayed saying so.

```

===== Error =====
Unknown Command
Hit any Key to Continue
=====
```

Simply hit a key to continue initializing the PK-88. This Error Window may pop up at other times when the PK/PCB-88 receives bad data or an Unknown Command error message from PC-Pakratt-88. Unknown Command errors can result when using older versions of firmware in your PK-88.

After you leave PC-Pakratt-88, you need not turn off the PK/PCB-88. If you decide to run PC-Pakratt-88 again PC-Pakratt-88 will attempt to establish communications with the PK/PCB-88 using the default baud rate. PC-Pakratt-88 will again initialize all the parameters as they have been stored in the file PK88DEF_.DEF.

4. Navigating About PC-Pakratt-88

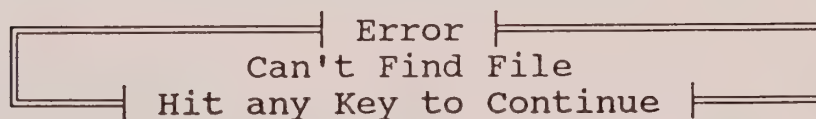
As mentioned, PC-Pakratt-88 can utilize a Microsoft compatible mouse. The mouse can be used to select items from menus or change the state of parameters in the setup screens. Most of the menus also have 'Hot Keys', which when pressed, will execute a menu function.

Which Mouse Button Does What ?

A word about mouse operation is necessary before we proceed. When mouse operation is supported, the mouse cursor will be displayed. The left mouse button is used to select items from in a menu or screen. The right button is used to call the Help display. When selecting an item from a menu, click the left button on the desired menu item.

The mouse also comes in handy when an Error Window appears. By clicking the left button on the message at the bottom of the window, the window will close and you can continue. This is also true of the Help Windows.

A typical Error Window will look like this:



Clicking the left bottom on the message "Hit Any Key to Continue" will cause the window to disappear and allow the program to continue.

The right button is used exclusively to display a Help Screen. The right button is only active in the Packet Screen and the Setup Screens. The right mouse button mimics the ALT-H keystroke which also brings up the Help Screen.

The left mouse button is also used to move the text cursor around the Setup Screens and to toggle certain parameters in the screens. Parameters which accept ON and OFF as their values can be toggled back and forth using the left button. Other parameters such as HBAUD can be cycled through the possible values by clicking the left button on the parameter's argument.

Mouse Notes

If you have a Logitech Bus Mouse and you find that the cursor disappears about halfway down the screen, then you may need a newer ver-

sion of MOUSE.COM. We have experienced problems with MOUSE.COM files dated in September 1987. Logitech is a registered trademark of LOGITECH, Inc.

Navigating the Menu System Without a Mouse

If you don't have a mouse, don't panic. The cursor can be moved through the menus using the cursor keys. When the cursor highlights the proper menu item simply press RETURN. Pop-up windows also look for a key to be pressed to close them. The window will tell you which key to press.

Most of PC-Pakratt-88's menus have 'Hot Keys'. By pressing the 'Hot Key' the menu function will be executed as if you moved the cursor to that menu item and pressed RETURN. The 'Hot Key' will be displayed in the menu in reverse video of the menu items. The 'Hot Keys' will be displayed in BOLD in this manual. The 'Hot Key' is always some letter in the menu item text, each menu item in a menu has an unique letter as it's 'Hot Key': The last item in a menu is usually ".Back". ".Back" will return you to the screen or menu which called up this menu. The 'Hot Key' for this menu item is always a period (which is the 1st letter in the menu item text).

5. Configuring PC-Pakratt-88

PC-Pakratt-88 allows you to configure the PK/PCB-88 and itself according to the way you like to operate. Both the configuration of PC-Pakratt-88 and the PK/PCB-88 are stored to disk and will be read when PC-Pakratt-88 is run again.

Configuring the PK-88 for the First Time

Once the communications port information and baud rate has been entered and the default parameters sent to the PK/PCB-88, another menu will be displayed.

```
Configuration Menu
Packet Setup Screen
PK-88 Message Setup Screen
Command Setup Screen
Save PK-88 Parameters
Load PK-88 Parameters
.Go to Communications Menu
```

This menu is only shown when PC-Pakratt-88 is run for the 1st time or if the PK88DEF_.DEF file has been deleted.

The Setup Screens allow you to simplify setting the large number of PK/PCB-88 parameters. The FILES Menu allows you to save the values of the parameters; specify a new filename to store the parameters; save the present PC-Pakratt-88 configuration and save the macro key definitions. All this will be discussed in the next couple of sections.

The last item, ".Go to Communications Menu" will bring you into the Communications Menu where you can choose other options. You can also call the Setup screens and the Files Menu from the Communications Menu.

Setup Screen

The Setup Screens selection allows you to change the various PK/PCB-88 parameters. PC-Pakratt-88 can display a brief Help message explaining each parameter in the Setup Screen but the PK/PCB-88 manual is still the definitive source.

There are two different setup screens. The Packet Setup Screen contains the parameters specific to Packet operation. The PK-88 MESSAGE screen shows the parameters which accept long text strings or multiple call signs such as UNPROTO, MBX, and MFROM.

Parameters relating to Pakratt/Computer communications are not presented on these screens as they are handled by the program.

Obtaining Help For The Setup Screens

To display a Help Screen for any of the parameters shown in the Setup Screens, place the cursor over the parameter and press ALT-H. A Help Screen will be displayed explaining the parameter. To exit the Help Screen press ESC.

If you have a mouse, position the mouse cursor over the parameter and click the right mouse button. To exit the Help Screen, point to the message in the bottom border of the window and click the left button.

The Packet Setup Screen

The Packet Setup Screen will look something like this:

| Packet Setup Screen | | | | Alt-H:Help |
|--------------------------|---------------|-----------------|---------------|------------|
| 3RDPARTY OFF | 8BITCONV OFF | ACKPRIOR OFF | ALFPACK OFF | |
| AX25L2V2 ON | AXDELAY 000 | AXHANG 00 | BBSMSGs OFF | |
| CASEDISP 0 | CHECK 030 | CHCALL OFF | CMDTIME 010 | |
| CMSG OFF | CONALARM SOFT | CONSTAMP OFF | CPACTIME OFF | |
| DAYSTAMP OFF | DWAIT 016 | FRACK 07 | FULLDUP OFF | |
| HBAUD 1200 | HEADERLN ON | HID OFF | HOMEbBS % | |
| ILFPACK ON | KILONFWD ON | LITE OFF | MAILDROP OFF | |
| LAXFRAME 1 | MBELL OFF | MCON 0 | MDIGI OFF | |
| MDMON OFF | MID 000 | MMSG OFF | MONITOR 4 | |
| MPROTO OFF | MRPT ON | MSTAMP OFF | MYALIAS % | |
| MYCALL | MXMIT OFF | MYMAIL % | PACLEN 064 | |
| PASSALL OFF | PERSIST 063 | PPERSIST ON | RELINK OFF | |
| RESPTIME 000 | RETRY 10 | SLOTTIME 030 | SQUELCH OFF | |
| TONE 3 | TRIES 00 | TXDELAY 040 | USERS 01 | |
| WHYNOT OFF | XMITOK ON | | | |
| BEACON [EVERY] | Interval[000] | PACTIME [AFTER] | Interval[010] | |
| MFILTER [80][00][00][00] | | | | |
| ESC to Exit | | | | |

Changing the Parameters' Default

Certain parameters require different types of inputs. For parameters which accept a number or a text string, move the cursor to the parameter value and type the number or text string. MYCALL or DWAIT are examples of such parameters. For parameters which toggle between ON and OFF, move the cursor to the parameter value and press RETURN. WHYNOT and MDMON are examples of such parameters. The parameters such as HBAUD and TONE will cycle through the possible values each time the RETURN key is pressed.

If you have a mouse, move the mouse cursor to the applicable parameter. If the parameter toggles, click the left button to toggle the parameter. If the parameter requires a number or a text string, click the left mouse button to move the text cursor before entering the number or text string.

For parameters that require text strings, PC-Pakratt-88 will accept a limited number of characters for the text string. The number of characters varies, depending upon the parameter. If the number is exceeded, the string will be cleared and the excess characters will compose a new string. For example, MYCALL and MYA accept up to 10 characters. If a1bcd was typed followed by a RETURN for MYCALL your call would become A1BCD. If you typed a1bcdefghij-1, A1BCDEFGHI is sent to the PK/PCB-88 as your call. J-1 would then over write A1BCDEFGHI in the window and would make up the beginning of a new callsign. You can backspace (rub-out) the j-1 and re-type the callsign. Until you enter another callsign, the PK-88 thinks your call is j-1. Note that for MYCALL and MYA, the call will be displayed in uppercase in the Setup Screen. If the text string contains illegal characters, the PK/PCB-88 will issue an Error Message. That Error Message will be displayed by PC-Pakratt-88 in an Error Window.

The same is also true for numbers. Some commands will accept 3 digits while others will accept only 1. When entering a number with fewer digits than the maximum accepted, enter the number followed by a RETURN. Numbers will always be displayed containing the maximum number of digits, filled with leading 0's if necessary.

Some parameters, such as MYMAIL, are not supported by earlier versions of the PK/PCB-88's ROM. In this case, an Error Message will be displayed when ever this parameter is changed (or initialized for the 1st time). Press a RETURN when the Error Message Window appears on the screen to continue. The words "Unknown Command" will be displayed in the Error Window. This message shows you that the PK-88 does not understand the command BBSMSGs. PC-Pakratt-88 supports the latest ROM set (August 1991).

Press ESC to exit the Packet Setup Screen or click the left mouse button on the message in the bottom border of the screen.

The PK-88 Message Setup Screen

The PK-88 Message Setup Screen contains the parameters which require long text strings (such as CTEXT) or multiple arguments (such as DFROM). Move the cursor to the parameter desired and press RETURN. If a text string is required, a small window will appear and you will be prompted for the text string. The character Control-P is used as the passthru character. The passthru character allows you to insert certain control character in your text, such as a RETURN. Normally a RETURN is interpreted as the end of the text. If you type a ^P then a RETURN, the RETURN is inserted in the text, and you can continue typing the text. The passthru character cannot be redefined. Note that in

human mode, the PK/PCB-88 normally uses a ^V for the passthru character. In host mode the PC-Pakratt-88 defines the passthru character as a ^P.

The YES/NO/NONE/ALL arguments for MTO, MFROM, DFROM and CFROM will cycle each time the RETURN key is pressed. If you have a mouse cursor, move the mouse cursor to the desired parameter and click the left mouse button. To enter a callsign as an argument for the above command, move the cursor to the appropriate box and type the callsign or click the left mouse button over the appropriate box and type the callsign.

The parameter MBX behaves a little differently because it accepts either callsigns or the NONE or ALL arguments. You can enter either one or two callsigns or the word NONE. Unlike MTO, you cannot press the RETURN key over the word NONE. NONE must be specifically typed in.

| PK-88 Message Setup Screen | | Alt-H:Help | |
|--|---|-------------|-----|
| UNPROTO: CQ | | | |
| BTEXT | : | % | |
| CTEXT | : | % | |
| MTEXT : Welcome to my AEA PK-88 Maildrop. | | | |
| MBX | : | [None] | [] |
| MDPRMPT: Subject:/Enter Message, ^Z (CTRL-Z) or /EX to End | | | |
| CFROM | : | [All] | |
| | | [] | [] |
| | | [] | [] |
| DFROM | : | [All] | |
| | | [] | [] |
| | | [] | [] |
| MFROM | : | [All] | |
| | | [] | [] |
| | | [] | [] |
| MTO | : | [None] | |
| | | [] | [] |
| | | [] | [] |
| | | ESC to Exit | |

When done, press ESC to return to the previous menu. If you have a mouse, click the left button on the message in the bottom border of the window.

6. The Files Menu

The FILES Menu allows you to save or load the Default, Macro and Configuration files. This is where you can also specify a text editor (other than the default editor) which PC-Pakratt-88 will call to edit files. The Configuration file stores the com port number, baud rate, and screen colors. The Default file stores the PK/PCB-88's parameters. PC-Pakratt-88 stores the parameters normally in a file called PK88DEF_.DEF.

The FILES Menu can be chosen from the Communications Menu or from the Configuration Menu which is displayed when PC-Pakratt-88 is run for the first time. The FILES Menu looks like this:

```
| Files Menu |
Save PcPakratt Configuration
Save PK-88 Parameters
Load PcPakratt Configuration
Load PK-88 Parameters
Set PK-88 Parameter File
Set Macro File
Specify Editor
External Xfer Program
Name Message Files
Help
.ESC
```

Use the cursor, your mouse or the 'Hot Key' to select the desire menu item.

Be sure to save the parameter defaults after you have changed them in the Setup Screens, otherwise the old values will be loaded the next time PC-Pakratt-88 is run. Remember to save the Configuration after you change the baud rate, com port number, screen colors, or specify a text editor.

Saving Your Configuration

"Save PC-Pakratt-88 Configuration" allows you to save the communications port information, baud rate, screen colors, the name of the text editor, and the name of the default file (the .DEF file) to the file PK88DEF_.CFG. If PK88DEF_.CFG cannot be found, you will be prompted for the communications port information before this information is saved to PK88DEF_.CFG. PK88DEF_.CFG must be on the same drive and in the same directory as PP88.EXE.

Saving the Default Parameters

"Save PK-88 Parameters" saves the parameters shown in the Setup Screens to the .DEF file. The filename where the parameters are stored can be changed by choosing the "Set Default File" item from this menu. The default filename for the default file is PK88DEF_.DEF. This file must be on the same drive and in the same subdirectory as PP88.EXE.

Reloading the Configuration

"Load Configuration" reads the file PK88DEF_.CFG and restores all the variables stored in this file. The file PK88DEF_.CFG must be on the same drive and in the same directory that PC-Pakratt-88 is run from.

Loading The Parameters' Default Values

"Load Defaults" reads the parameter values from the .DEF file and re-initializes the PK/PCB-88. The parameters will be displayed in a window as they are sent to the PK/PCB-88.

Setting the Default Parameter Filename

PC-Pakratt-88 has the provision for multiple Parameter Default files. Parameter Default files always have the extension .DEF. This menu item allows you to give the Parameter Default file a new name. When you specify another .DEF file, you can then load from or save to this new .DEF file. If you save the Configuration, the name of the new .DEF file will be placed in the PK88DEF_.CFG file and the new .DEF file will be read when the PC-Pakratt-88 is run. The default filename is PK88DEF_.DEF. The .DEF file must be on the same drive and in the same directory that PP88.EXE is run from. PC-Pakratt-88 always attaches the extension .DEF to the filename regardless of what you type.

Setting the Macro File

Set Macro File allows you to specify the name of the file that contains the keyboard macro definitions. The default is PK.MAC. This file must reside on the same drive and in the same subdirectory as PP88.EXE. The definition of Keyboard Macros will be discussed in Section 9.1.

PC-Pakratt-88 automatically reads the default Macro File if it exists, so the macro keys are defined and ready to use when you begin operating.

Specifying a Text Editor

"Specify Editor" allows you to specify the text editor that is to be used to edit text files. An editor is supplied with PC-Pakratt-88, so unless you have an editor you prefer, you will not need to specify a new one. You will be prompted for the editor name. If the editor is not in the subdirectory specified in your PATH, you must include the path with the filename, e.g. C:\test\editor.exe. The editor name is stored in PK88DEF_.CFG. If you

use an editor such as WORDSTAR, WORD, or WORDPERFECT, be sure to save the file in ASCII format not in the editor's own format. Remember to re-save the Configuration File to store the editor name and path.

Rather than specifying a text editor, you could also specify the name of another program you might wish to run, like another file transfer program. PC-Pakratt-88 will think the other program is an editor and prompt you for a filename. You can specify arguments to your program by substituting the program's arguments for the filename. PC-Pakratt-88 will then spawn the process with the filename (or arguments) as the program's argument. When you exit the program, you will be returned to PC-Pakratt-88.

Specifying an External File Transfer Program

Since PC-Pakratt-88 has a built-in, YAPP™ compatible binary file transfer routine, this option will normally not be needed. However, if you have a program you like to use for file transfers, "External Xfer Program" allows you to specify the name of an external program this operation.

It is best to specify the name of a batch file rather than the program itself since PC-Pakratt-88 expects the program to reside in the same directory as PC-Pakratt-88. PC-Pakratt-88 sets the TBAUD parameter to 4800 baud prior to executing the file. PC-Pakratt-88 can be configured (from the PC-Pakratt-88 Parameters menu) to leave the PK/PCB-88 in either Host or Verbose mode.

PC-Pakratt-88 configures the PK/PCB-88 for the default expected by YAPP. YAPP is a Packet terminal program written by Jeff Jacobsen with binary file transfer capability. PC-Pakratt-88 will reset all the default parameters as well as the PK/PCB-88's internal clock when control is returned back to PC-Pakratt-88.

Two changes will have to be made to the initialization string in YAPP. The following is a sample of the last few lines from a modified initialization string:

```
CTRL-A OHOOFF CTRL-W
mon on
conok on
*** EOF (end of commands sent to TNC on program start)
conok off
mon off
host on
*** EOF (end of commands sent to TNC on program end)
```

Before YAPP starts sending commands to the PK/PCB-88, the host mode will have to be turned off. In the above example, the first line performs this function. When leaving YAPP, the last command sent to the

PK/PCB-88 must be the "Host On" command as seen above. Permission to print the Yapp initialization screen courtesy of Jeff Jacobsen.

Remember to re-save the configuration so the filename will be stored in the configuration file.

Section 10.1 discusses the creation of the batch file for executing YAPP.

Files Menu Help

When you choose this menu item, a help screen will appear describing the function of each of the items on the menu. To close this help screen, simply press any key.

PcPakratt Files Menu

<ESC> <Back> <Contents>

Save PcPakratt Configuration..Saves PcPakratt's configuration to PKDEF_.CFG. (all filenames, screen colors, Com port info printer info, and scroll back buffer size).

Save PK-88 Parameters.....Save the PK-88's parameters to disk.

Load PcPakratt Configuration..Loads PcPakratt's configuration from PKDEF_.CFG.

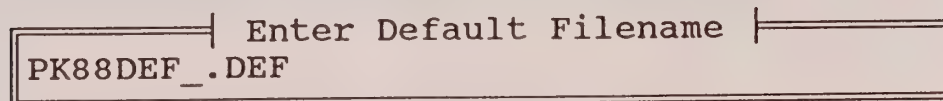
Load PK-88 Defaults.....Loads the PK-88's parameters and initializes the PK-88.

Set PK-88 Parameter File.....Sets the file where the PK-88's parameters are stored. Default is PKDEF_.DEF. The name of the file is stored in the configuration file PKDEF_.CFG.

Set Macro File.....Sets the name of the file to hold the macro definitions. Default is PK.MAC. The name of the macro file is stored in the

7. Line Editing and Window Prompts

For entering text strings for such things as filenames and Macro Key definitions, PC-Pakratt-88 has some simple line editing features. When prompted for text, say a filename, a window will appear and the default parameter (or the previously entered value), in this case the default filename, will be shown in the window. A description of what is being asked for will appear in the top border. For example:



```
Enter Default Filename
PK88DEF_.DEF
```

You can type over the filename to specify a new capture filename or just type over certain letters. The backspace key deletes the character to the left; the delete key deletes the character under the cursor. Pressing the insert key toggles on and off the insert mode, and the cursor will change to a 1 when in the insert mode. The normal underline cursor is shown when in the overwrite mode. In the insert mode, as characters are typed they will be inserted in the text. The left and right cursor keys also position the cursor in the text. Press the RETURN key to 'enter' the text string. The RETURN key truncates the text string so wherever the cursor was positioned in the string is where the string will be truncated. In other words, the left-over words do not need to be deleted.

In the above example, if you would like to use the default file for the capture file, just press RETURN, and PK.LOG will be used. If you move the cursor to the letter O and hit RETURN, the filename becomes PK.L.

If you press the escape key, any changes you made will be ignored. Under certain conditions, the ESC key will also serve to cancel a command, such as opening a capture file.

8. The Communications Menu

The Communication Menu shows the options available. Use the cursor, your mouse or the 'Hot Key' to select the menu items.

```

| Communications Menu |
| PACKET Screen      |
| Dumb Terminal      |
| Setup Screens      |
| Change Colours     |
| Files Menu         |
| PcPakratt Parameters |
| Shell to DOS       |
| Call Editor        |
| Exit Program       |
|

```

If you choose the Packet operating mode, a Receive, Transmit, and Status Window will be displayed on the screen. The top window is the Receive Window; the window below is the Transmit Window. The window at the bottom is the Status Window. In the Dumb Terminal mode the Receive Window occupies the full screen except for the Status Line at the top.

Changing the Screen Colors

"Change Colors" allow you to change the screen colors. You will be shown a menu of the various screens and menus. To exit, press escape or click on the message found in the bottom border of the window. Each item in the menu is shown in the color it would normally be displayed in on the screen. The Screen Colors Menu looks like this:

```

| Screen Colors Menu |
| Setup text         |
| Help Bold Text     |
| Help Border        |
| Rx Text            |
| Error Text         |
| Prompt Border      |
| Setup Border       |
| Help Underline Text |
| Status Text        |
| Tx Text            |
| Error Border       |
| Browse Status      |
| Help Text          |
| Help Italic Text   |
| Status Border      |
| Echoed Text        |
| Prompt Text        |
| Browse Text        |
| ESC to Exit       |

```

The SETUP text and SETUP border colors define colors for the Setup Screens. The Help text and borders colors define the colors Help information is displayed in. The QSO text and border colors define the colors of the QSO Log menus. The Search text and border defines the colors for the QSO search screen. The Log text and border defines the colors for

the QSO Log entry screen. The echoed text color defines the color for echoed text from the PK/PCB-88. This includes "link messages" from the PK-88 (like the *** CONNECTED *** message you get when first connect to another station in Packet).

The text shown in the Dumb Terminal mode is shown in the same color as text in the Rx Window. The Status Line for this mode is shown in the same color as the border of the Status Window. The Logo and initial screen colors will also be set to the color of the Rx Window.

To change the color of an item, move the cursor to that item and press RETURN. You can similarly chose an item by clicking the left button on the item. You will then be shown two windows sequentially; one for the possible Foreground colors and one for the Background colors.

```
| Foreground Color |
| (Black)          |
| Blue             |
| Green            |
| Cyan             |
| Red              |
| Magenta          |
| Brown            |
| Grey             |
| Dk Grey          |
| Blue             |
| Green            |
| Cyan             |
| Red              |
| Magenta          |
| Yellow           |
| White            |
```

```
| Background Color |
| (Black)          |
| Blue             |
| Green            |
| Cyan             |
| Red              |
| Magenta          |
| Brown            |
| Grey             |
```

Again move the cursor to choose the color desired. The cursor will be positioned to the default color initially. After the Foreground color is chosen, the menu for the Background colors will be displayed. When a Background color is chosen the item will be shown in the menu with the new colors.

If a monochrome monitor is used, all colors will be set to white foreground with a black background initially.

Changing PC-Pakratt-88's Parameters

PC-Pakratt-88 also allows you change a few things specific to itself. PC-Pakratt-88 Parameters Menu allows you to change the number of lines in the Receive Window, the baud rate, the Com port, whether "Unknown Command Errors" are displayed, whether to initialize the mouse cursor, and whether to initialize the PK-88 after exiting the dumb terminal mode.

Once you have chosen this item from the Communications Menu, PC-Pakratt-88 Parameters Menu will be shown.

| PcPakratt Parameters Menu | |
|---------------------------|------------|
| Unknown Command Errors | (Enabled) |
| Initialization of PK-88 | (Enabled) |
| Specify Com Port | (Port 1) |
| Specify Baud Rate | (9600) |
| Initialize Mouse Cursor | (Disabled) |
| Rx Window (25 line mode) | (15) |
| Rx Window (High Res mode) | (28) |
| Save/Restore Mail | (Disabled) |
| Host Mode on Exit | (Enabled) |
| Specify Printer Port | (LPT1) |
| Screen Blank | (Disabled) |
| Screen Blank Interval | (15) |
| Screen Attributes | (Color) |
| Packet Echo | (Enabled) |
| Fast Initialization | (Disabled) |
| Video | (Direct) |
| TNC Time | (GMT Time) |
| Help | |
| .ESC | |

Turning Off Unknown Command Errors

"Unknown Command Errors" determines whether or not PC-Pakratt-88 will display an "Unknown Command" Error Message as a response to command being sent to the PK/PCB-88 that it does not understand. This error can occur when an older ROM revision is being used since the PK/PCB-88 will not be able to understand these new commands. Clicking the left mouse button on this item will toggle it between enabled and disabled. When enabled, "Unknown Command" errors will be displayed.

Initializing the PK-88 When Returning From Dumb Terminal Mode

"Initialization of PK-88" determines whether or not PC-Pakratt-88 will re-initialize the PK/PCB-88 after exiting the dumb terminal mode. When enabled, PC-Pakratt-88 will re-initialize the PK/PCB-88. Though disabling this feature results in a significantly faster return from the Dumb Terminal mode, you must be careful not to change any of the PK/PCB-88's parameters while in the Dumb Terminal mode because they will not be accurately represented in the Status Window or in the Setup Screens. You can re-initialize the PK/PCB-88's parameters from the Files Menu by choosing the Load Parameter Defaults.

Changing the Com Port and Computer Baud Rate

PC-Pakratt-88 allows you to change the Com port number and the baud rate between the computer and the PK/PCB-88. If either of these items are chosen, PC-Pakratt-88 will sever the link to the PK/PCB-88 and attempt to re-establish it. If you change the Com port, PC-Pakratt-88 will display a message window:

Connect PK-88 to Proper Port
Hit any Key to Continue

Connect the PK/PCB-88 to what ever port you specified and press a key. PC-Pakratt-88 will issue a RESTART command to the PAKRATT, thus the PAKRATT may lose any messages stored in the PakMail buffer.

Initializing the Mouse Cursor

"Initialize Mouse Cursor" tells PC-Pakratt-88 to set the mouse cursor to a predefined value. If you have a mouse connected to your system and you don't see a mouse cursor on the screen, you should enable this option. Some mice, such as the Mouse Systems mouse, need to have the mouse cursor set. Others, like the Logitech mouse, don't.

Changing the Size of the Rx & Tx Windows

PC-Pakratt-88 allows you to specify the numbers of lines in the Receive Window. From this number the size of the Transmit Window is calculated by the formula:

$$\text{Tx window} = (\text{Total \# of screen lines}) - (\# \text{ lines in the Rx window}) - 5$$

You can have up to 19 lines in the 25 line mode and 37 lines in the High Res mode. The default number of lines is shown in () in the menu.

Turning On Automatic Saving/Restoring of Maildrop Messages

If you have Firmware dated before June 1990: "Save/Restore Mail" determines whether or not PC-Pakratt-88 will save the mail messages stored in the PK/PCB-88. When the PK/PCB-88 is powered down, any mail messages stored in the PK/PCB-88 will be lost. PC-Pakratt-88 can read these messages and store them to a file and re-load them again. PC-Pakratt-88 stores these messages in a file called PKMAIL.MES. PC-Pakratt-88 will restore the messages in the original order, with the same date and approximately the same time as when they were first stored in the PK/PCB-88. If the save mail messages option has been enabled and the file PKMAIL.MES cannot be found, an Error Message will be displayed

stating so. Saving the messages stored in the PK/PCB-88 may take a few seconds if the maildrop buffer is full.

If you have June 1990 firmware or later: As the internal lithium battery should be enabled, your maildrop messages will be backed up in the PK/PCB-88's RAM. You may still use this option if you wish; it would provide a safeguard against the failure of the battery.

Specifying a Printer Port

You need to specify a printer port in order to print incoming data from the operating screens (Shift F2). The default is LPT1. When you choose this menu item, another menu will pop up allowing you to choose which printer port to use. PC-Pakratt-88 supports LPT1 through LPT3 but does not attempt to verify that the printer port exists in your system.

Enabling the Screen Blanker

To help prolong the life of your monitor, you may want to use PC-Pakratt-88's built-in screen blanker. Selecting this item with the mouse or RETURN key will toggle from ENABLED to DISABLED and vice-versa. You may also change the Screen Blank Interval, which is calibrated in number of minutes.

Changing the Screen Attributes

This menu item makes it easy to change between color and black-and-white without changing the individual colors.

Packet Echo

This item allows you to control whether your transmitted text is echoed to the receive screen. Enable the Packet Echo to see your transmitted text in the receive window.

Fast Initialization

If your PK/PCB-88 has a good lithium battery which is enabled, and if the PK/PCB-88 is not used with any other programs, then Fast Initialization will dramatically decrease the amount of time necessary to start the program. If Fast Initialization is enabled, PC-Pakratt-88 will look at the PK-88 when the program is started and see if it is still in the Host Mode. If it is, the parameter download will be bypassed and the Communication Menu will come up almost immediately.

The -f and -i command line switches have been added to control this option before starting the program. See page 6.

Changing the Screen Write Method

If you are experiencing program lock-ups or link errors, you may want to set the VIDEO menu option to BIOS calls. This method is slower, but may be more compatible with unfriendly TSR programs.

PC-Pakratt-88 Parameters Menu Help

When you choose this menu item, a help screen will appear describing the function of each of the items on the menu. To close this help screen, simply press any key.

Exiting the PC-Pakratt-88 Parameters Menu

".Back" or "ESC" exits this menu and returns you back to the Communications Menu. If you have changed the baud rate and/or the Com port number, a window will appear stating that the link is being re-initialized. If you want these changes to be permanent, go to the Files Menu and save the Configuration.

9. Operating With PC-Pakratt-88

More About the 24 Hour Clock

Another word about the 24 hour clock is warranted. As mentioned previously, the local time and date as well as the GMT time is displayed in the right corner of the Status Window. The PK-88 is automatically initialized to the GMT time. For the GMT time to be displayed correctly, the DOS command SET TZ=EST5EDT must be placed in the AUTOEXEC.BAT file. This command can also be typed in before running the program. (EST is the time zone, 5 is the number of hours different from GMT and EDT means daylight saving time is used in your area). The local time is displayed in the top right corner of the Status Window, the GMT time is displayed below that. The date is displayed below the GMT time. If the SET TZ command is not used, PST8PDT is assumed.

If your time zone is ahead of GMT time, the number you would specify will be negative.

General Operating Information

Once Packet has been chosen from the Communication menu, the Operating Screen will look like this:

```
===== ESC to Exit ===== 000 % =====

| ALT-H:Help | ALT-M:Macro Keys | CTRL-PgUp:Clear Buffer |
Packet  TONE:3  Disconnected Beacon:E 000  Lite:OFF Mdm:OFF  Mail:OFF 15:15
CONVERSE 1200  S:01 U:00 R:00 CH:0                                22:15Z
| PgUp:Scroll Back |=====09/18/91=====
```

The Status Window will display information pertaining to the Packet mode. Information such as TONE setting, HBAUD setting, who you are connected to, the maildrop setting, etc. The date and time (in both GMT and local time) is also displayed.

To exit any of the Communications Screens, press ESC. If you have a mouse, click the left mouse button on the message at the bottom of the Receive Window. Clicking the right mouse button is equivalent to typing ALT-H. A Help Screen defining the function keys will be shown. The Help Screens will be further explained in this section.

The percentage number on the line separating the transmit and receive windows shows how much of the Scroll Back buffer has been used. To reset this counter to zero, the buffer must be cleared with a CTRL-PageUp.

Transmit and Receive Buffers

The transmit buffer is 1K bytes and the receive buffer is 32K bytes. This seems adequate for normal operation. Data is transferred from the PK/PCB-88 to PC-Pakratt-88 only when under the following conditions:

- While in the Packet screen.
- While in the Dumb Terminal Mode.
- Shelled to DOS.
- Editing a file.
- Viewing a file.

This means if you are looking at the Setup Screens, no data is being transferred from the PK/PCB-88 to PC-Pakratt-88. Thus you may miss information if the PK/PCB-88's internal buffer fills up.

While editing a file or doing any of the forementioned activities, PC-Pakratt-88 polls the PK/PCB-88 every 1-2 seconds for data. If data is available it will be transferred from the PK/PCB-88 to PC-Pakratt-88's internal buffer. The data will be displayed once you are back in the Packet screen.

Data Capture

PC-Pakratt-88 allows for capturing of incoming data for viewing at a later time, or for unattended monitoring. The F1 key toggles the CAPTURE feature on and off. You will be prompted for a filename to store the information. When the Capture facility is on, the word CAPTURE will appear in the Status Window. The default filename for the Capture file is PK.LOG, but you can specify any valid DOS filename (like PRN, LPT1, or TEST.TXT).

The Alt-F1 key suspends and releases (holds/unholds) data flow to the Capture file. The word HOLD will be displayed in the Status Window where the word Capture had appeared. Pressing Alt-F1 again will release the Capture file, and data will again be stored in the Capture file. The word CAPTURE will then appear in the Status Window. Alt-F1 will have no effect if a Capture file was not opened previously.

Data Printing

PC-Pakratt-88 also allows incoming data to be printed to your printer as it arrives. The Shift F2 key toggles the printer on and off. The word PRN will appear in the Status Window to indicate data will be sent to your printer.

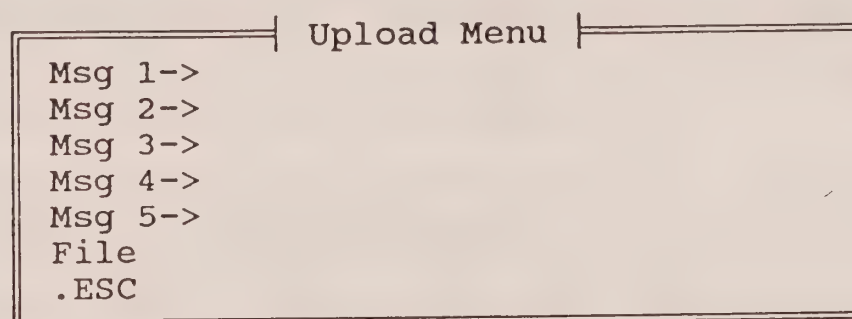
Like data capture, the printer output can be suspended or held using the ALT-F2 key. The word PRN-HOLD will be displayed in the Status Win-

dow, indicating that data will not be sent to the printer. If you press ALT-F2 again, the data will be sent once again to the printer and the printer status will be reflected in the Status Window.

You can specify the printer port to use from the PC-Pakratt-88 Parameters Menu described in Section 9.1.

Sending a File

PC-Pakratt-88 also allows text files to be sent (or uploaded) to another station. When you press Shift-F1, you will be shown a menu of possible files to upload as shown below. PC-Pakratt-88 provides for up to 5 message files to be defined. The contents of these files can be entered using any text editor. Message files will be discussed in Section 12.1. By choosing the File option, any text file can be sent to the other station.



If a file upload is in progress, the word UPLOAD will appear in the Status Window.

File uploading is a very handy feature, for instance, a file containing your station description or even a CQ message can be sent to other stations at any time during the QSO. Anything that you intend to send repeatedly should be stored in a file or a message file.

PC-Pakratt-88 uses a simple form of handshaking for Packet file uploading. PC-Pakratt-88 checks the number of unacknowledged Packets and will only transmit a Packet when the number of unacknowledged Packets is 0. To abort a file upload, press the ESC key. Since the ESC key also exits you from the communications screen, be careful not to press the ESC twice. You cannot use the mouse to abort an upload.

Also included in the program is a binary file transfer routine compatible with WA7MBL's YAPP program. It is useful for many types of uploads and downloads, among them transfers of binary program files. To invoke the binary file transfer routine, press ALT-F. If you have any questions about how to proceed, press ALT-H for help.

Scroll Back Buffer

PC-Pakratt-88 has a Scroll Back Buffer which can hold up to 900 lines of data. The size of the Scroll Back Buffer can be changed from the PC-

Pakratt-88 Parameters Menu, discussed in Section 8.1. As data is received, it is stored in the buffer. PC-Pakratt-88 will also retain the color information for the data. When the information is later reviewed, the text will have the same colors as it did when it was displayed on the screen.

To activate the Scroll Back Buffer routine, press the PgUp key. If you have a mouse, click the left mouse button on the PgUp message on the bottom border of the Status Window. When the PgUp key is pressed, the Receive Window will become the Scroll Back Window and the dividing line between the Receive and Transmit Windows will become the Status Line for the Scroll Back Window. The size of the Scroll Back Window will be the same size as the size of the Receive Window:

```
Ln#:0001 File:QSO BUFFER      Home End PgUp PgDn ↑↓ F3:Search F1:Jump F2:Save ESC
```

The number of the line at the very top of the Scroll Back window is shown on the right side of the buffer Status Line. If the buffer should fill, the "top" 25% will be cleared to make room for more incoming data.

The Home key positions you at the beginning of the buffer. The End key moves you to the end of the buffer. The PgUp and PgDn keys move you up or down 1 screen page at a time. The up and down arrow keys move you up or down one line at a time.

The F1 key allows you to jump to any line in the buffer. You will be prompted for the line number to jump to. The line you specified will be displayed at the top of the window if possible. PC-Pakratt-88 will not let you display past the end of the buffer and PC-Pakratt-88 will attempt to fill the window with text. If you try to jump to the last line in the buffer, PC-Pakratt-88 will display the last page of the buffer since it cannot place the last line in the buffer at the top of the window. If the number of lines in the buffer is less than the buffer window, the remaining lines will be filled with blanks. The F2 key allows you to save the information in the buffer after it has been received. When F2 is pressed in this mode, a window will appear prompting you for a file name.

The F3 key brings up a Search Menu to allow you to search for specific text in the buffer:

| |
|-----------------|
| Search String |
| Search Next |
| Search Previous |
| .ESC |

To begin searching, you must first specify the string to search for. "Search String" will prompt you for the string to search for. The search is case specific, you must match lower and upper case exactly or PC-Pakratt-88 will not find a match. Once a search string has been entered, you can search forward or backwards in the buffer from the current position in the buffer. The line which contains a match will be displayed at the top of the screen if possible.

If you have a mouse, you can click the left mouse button on any of the commands in the buffer Status Line to execute that command. For example clicking on the word "Search" will cause the Search Menu to appear.

To return back to the Operating Screen, press the ESC key or click the left mouse button on the word ESC.

While you are reviewing the buffer, PC-Pakratt-88 will continue to poll the PK-88 for incoming data so the PAKRATT's buffer will not overflow. When you return back from the Scroll Back routine, the data will be displayed in the Receive Window (rather quickly).

As mentioned earlier, the Scroll Back Buffer will hold up to a maximum of 900 lines of data. When the maximum number of lines has been reached, PC-Pakratt-88 will throw away some of the lines at the beginning of the buffer. The number of lines thrown away depends upon the size of the buffer. PC-Pakratt-88 discards the first 25 % to make room for more data. PC-Pakratt-88 initially sets the buffer size according to how much memory space is available, but you may set it to another value from the PC-Pakratt-88 Parameters Menu.

Defining Macro Keys

The keystrokes ALT-1 through ALT-0 can be defined so that PC-Pakratt-88 will send a text string when that keystroke is pressed. The ALT-M key will bring the Macro Menu and Definition Window:

| Macro Keys | |
|-------------|--|
| Macro 1 -> | |
| Macro 2 -> | |
| Macro 3 -> | |
| Macro 4 -> | |
| Macro 5 -> | |
| Macro 6 -> | |
| Macro 7 -> | |
| Macro 8 -> | |
| Macro 9 -> | |
| Macro 10-> | |
| Edit Macro | |
| Save Macros | |
| Load Macros | |
| Name Macro | |
| Help | |
| .ESC | |

To display the definition for ALT-1, move the cursor to menu item "Macro 1" and press return or click the left mouse button on "Macro 1" or use the 'Hot Keys'. You can only edit the macro being displayed in the lower window.

Up to 5 lines of text can be stored in a macro. You use the CTRL-P passthru character to imbed RETURNS or control characters in your macro.

From this menu, you can also save and load macro definition stored on disk. The file the macros are save to is define in the Files Menu discussed in Section 6.1.

PC-Pakratt-88 automatically reads the macro file before initializing the PK-88.

Keyboard Editing

PC-Pakratt-88 allows editing of the text you type, on a word by word basis, before it is sent to the PK/PCB-88. That is, PC-Pakratt-88 does not send what you type until a space, a ?, or a control character is pressed. This means you can use the backspace key to rub-out characters you don't want and re-type the character or characters. The maximum number of characters in 1 word is 64. When 64 characters have been entered the text will be sent to the PAKRATT. In Packet operation, the PC-Pakratt-88 only sends text when the SENDPAC character is entered or when PACLEN characters have been entered. Since the SENDPAC character is used to tell PC-Pakratt-88 to send the line, you can use the backspace key to edit the entire line.

10. Packet Operation

Packet Operation is composed of two parts; normal Packet operation and maildrop operation.

Normal Packet Operation

The Status Window for Packet contains a variety of information specific to Packet. The Packet status, the number of unacknowledged Packets, the number of retries, and the channel number are displayed in the Status Window. These are abbreviated by the letters: S:, U:, R:, and CH: respectively. If a particular channel is not connected to anyone, the word Disconnected is shown in place of a callsign. PC-Pakratt-88 displays the callsign of the station you are connected to. As the channel is changed, the callsign of the station connected to on that channel will be displayed.

The word CONPERM shown in the example Status Window above reflects the status of this parameter. CONPERM can be toggled using the F8 key.

CONVERSE (CONMODE) can be toggled by pressing the F7 key or by clicking the left mouse button on the word CONVERSE. When in TRANSPARENT mode, the word TRANSPARENT will be displayed. Your PK or PCB-88 manual more fully describes CONVERSE and TRANSPARENT operation.

The parameter MDM (MDMON) can be toggled by pressing the F6 key. You can also click the left mouse button on the word OFF which is to the right of MDM.

The parameter MAIL (MAILDROP) can be toggled by pressing the Shift-F6 key. You can also click the left mouse button on the word OFF which is to the right of MAIL.

The channel number can be changed using the up and down arrow keys. The number of stations that you can be connected to is set by the parameter USERS which can be set from the Packet Setup Screen. If you have a mouse, clicking the left button on the channel number will increment the channel number. Channel numbers range from 0 to 9.

By pressing the F10 key or clicking the mouse on the word TONE, you can cycle through the possible values for TONE. When TONE is set to 2 or 3, the value of HBAUD will be set to 1200. When TONE is set to 0 or 1, the value of HBAUD will be set to 300. Pressing F9 or clicking the mouse on the value will cycle the value of HBAUD (similarly to the way it is cycled in the Packet Setup Screen).

ALT-T will clear the any data in the PK/PCB-88 transmit buffer.

ALT-S will bring up the Packet Setup Screen discussed in section 5.1. To remove a callsign from one of the MFROM-MTO-DFROM-CFROM parameter lists, move the cursor to the desired callsign, press the spacebar and press the return key.

You can list the stations your PK/PCB-88 has heard so far by pressing the END key (MHEARD). A window will appear showing the stations heard. Those stations marked with an '**' designate stations directly heard by your station.

```

| Stations Heard |
20:45:57 W2JUP*
20:44:44 N7NSI*
20:44:24 KB7B*

<RET> to exit ---- Y to clear

```

The PAKRATT remembers the last 18 calls, if DAYSTAMP is ON then the date will also be displayed. Press the RETURN key to continue. The ESC key will clear the list and continue. If you have a mouse, you can click the left button on either "<CR> to exit" or "ESC to clear".

Obtaining Help

A Help Screen shows the function key definitions when ALT-H is pressed from an Operating Screen. A Help Screen will also be displayed when the left mouse button is clicked on the word Help in the Status Window. If the right mouse button is clicked anywhere in the Transmit or Receive Windows, the Help Screen will also be displayed. Because the function definitions are different in each mode, this feature is helpful in keeping track which key does what. Press ESC to close the Help Screen, or click the left mouse button on the message at the bottom of the window.

To execute any of these functions, press the respective function key.

You can also click the left mouse button and any of the key definitions (i.e. F1, F10, Home) to execute that function.

Note: You can not Click on "ESC... Return to Communications Menu" since the ESC key exits this menu. This item in the help screen is inactive.

| Packet Help Screen Function Keys | Alt Keys |
|--------------------------------------|--------------------------------------|
| <F1>.....Open/Close Log File | <ALT-B>.....Connect Status |
| <Shift F1>....Start/Stop File Upload | <ALT-C>.....Clear Rx Window |
| <CTRL F1>....View A File | <ALT-D>.....Shell to DOS |
| <ALT F1>.....Hold/Release Log File | <ALT-E>.....Call Editor |
| <F2>.....MDCHECK/Mail Menu | <ALT-F>.....Binary File Xfer |
| <SHIFT F2>....Open Close Printer | <ALT-M>.....Define Keyboard Macros |
| <ALT F2>.....Hold/Release Printer | <ALT-K>.....Parameter Setup Screen |
| <F3>.....Connect | <ALT-S>.....SETUP Screens |
| <SHIFT F3>....Auto-Connect | <ALT-T>.....Clear Tx Window |
| <F4>.....Disconnect | <ALT-Y>.....External File Xfer |
| <F5>.....Packet ID | |
| <SHIFT F5>....Toggle BEACON Interval | Alt-1.thru 0..Execute Keyboard Macro |
| <ALT F5>.....BEACON Timing | |
| <F6>.....Toggle LITE | |
| SHIFT F6.....Not Used | |
| ALT F6.....Not Used | |
| <F7>.....Toggle MDMON | |
| <SHIFT F7>....Toggle MAILDROP | |
| <ALT F7>.....FREE | |
| <F8>.....Toggle CONPERM | |

Auto-Connect

Connect

PC-Pakratt-88 provides a means to store connect paths in file and to easily connect to those stations without a lot of typing. The Auto-Connect Menu looks like this:

```

AutoConnect Menu
Connect 1->
Connect 2->
Connect 3->
Connect 4->
Connect 5->
Connect 6->
Connect 7->
Connect 8->
Connect 9->
Connect 10->
Load
Save
Edit
Help
.ESC

```

You can only edit the connect string displayed in the Connect String Window. The name of the file that PC-Pakratt-88 stores the AutoConnect information is PKAUTO.CON. From this menu you can connect to the station shown in the Connect String Window by choosing "Connect". After

the CONNECT command has been sent to the PAKRATT, the Auto-Connect menu will close.

Calls can be separated by commas or blanks. You can list as many calls in your path as fits in the window but there can only be 1 call to connect to. In the above example, you would be connecting to KD4JP and the path is through WA2SPN-1 and ABQW.

Packet Maildrop Operation

To invoke the maildrop features of the PK/PCB-88, press the F2 key. You can also choose the MDCHECK from the Packet Help Screen. The line dividing the Transmit and Receive window changes to reflect that you are now in maildrop.

You must have MAILDROP set to ON, or you will receive a "Unknown Command" Error Message. Now every time you press F2 (or choose MDCHECK/Mail Menu from the Packet Help Screen, you will be shown the Mail Menu. You can also click the left mouse button on "maildrop" to call the Mail Menu.

```
| Mail Menu |  
Bye  
Kill Message  
List Messages  
Read Message  
Send Message  
Edit Message  
Load Messages  
Save Messages  
Free  
Help  
.ESC
```

Bye exits the maildrop. You can also exit the maildrop by pressing the ESC key (from the operating screen). You can also click the left button on the "ESC to Exit" message in the Transmit/Receive Window dividing line. When you kill or read a message you will be prompted for the message. If a message is read, it is displayed in the Receive Window. To see what messages are available, choose List Messages. The headings for the messages will be displayed in the Receive Window.

If there are no messages, an Error Window will appear displaying the message:

```
MailDrop Error  
Message Not Found  
Hit any Key to Continue
```

This Error Message will also be displayed when you attempt to kill, edit, or read a message that does not exist.

When reading or listing messages, the PC-Pakratt-88's response may be slowed if there is a large amount of incoming data stored in the PAKRATT's internal buffer. This data is intermixed with the maildrop data and PC-Pakratt-88 must sort through the data to figure out which is which. If this occurs, PC-Pakratt-88 will throw away the data and display just the maildrop data.

When sending a message, you will be prompted for the callsign of the station you are sending a message to. The line dividing the Transmit and Receive Windows will change to:

```
===== Mail Drop ===== Enter A ^Z to End Message ===== 000 % =====
```

If you have firmware dated July 1990 or later, you will be first prompted for the message title. Earlier versions of the ROM do not support message titles; consequently, you will not be prompted for a title. As you type the message, the text will be shown in the Transmit Window. You can also upload a message similarly to the way you would upload a file to another station. Press Shift-F1 and choose a file. The contents of the file will be placed in the message. To end a message, type a Control-Z and a RETURN. The dividing line will change back. Messages that are uploaded from a file will not be displayed in the Transmit Window.

If you attempt to send a message when there is not enough memory to hold another message in the PAKRATT, an Error Window will appear.

If you attempt to send a message which is larger than the available memory in the PK/PCB-88, the message will be truncated.

You cannot sign in to your mailbox while another station is connected to you or while a connect is in progress.

As mentioned in section 8.1, if you have enabled the Save Mail option, all messages stored in the PK/PCB-88 will be saved to the file PKMAIL.MES when you exit PC-Pakratt-88. The mail messages will only be restored if the

PK/PCB-88's maildrop buffer is found empty on startup. You can also save and restore maildrop messages from the Mail Menu.

When you edit a message you will be prompted for the maildrop edit command parameters. You can edit the message status (Private (P), Bulletin (B), Traffic (T)), Has-Been-Read (Y), Has-Not-Been-Read (N), Reverse-Forward (F)). You can also change the message destination, message source and destination BBS. The table below gives some examples.

message source and destination BBS. The table below gives some examples.

| <u>Parameter</u> | <u>Result</u> |
|------------------|---|
| 12 | Shows message # 12 info line |
| 12 > KD4JP | Sets KD4JP as message 12's destination |
| 12 < KD4JP | Sets KD4JP as message 12's source |
| 12 @ KD4JP | Sets KD4JP as message 12's destination BBS |
| 12 @ | Clears message 12's destination BBS |
| 12 P | Sets message 12's status to Private |
| 12 N | Sets message 12's status to Has-Not-Been-Read |
| 12 F | Sets message 12's status to Reverse-Forward |

Be sure to make prior arrangements with the BBS you plan to Reverse-Forward messages with, as his BBS must connect to your maildrop and request reverse forwarding. ROM revisions prior to July 1990 do not support the edit command, message forwarding, and do not support the message status features.

External File Transfer Program

PC-Pakratt-88 provides for a hook to call an external file transfer program such as YAPP. The name of the program is specified in the Files Menu. It is best to specify the name of a batch file than run the program directly. The batch file or program must reside in the same directory as PC-Pakratt-88. PC-Pakratt-88 sets the TBAUD parameter to 4800 and leaves the PAKRATT in host mode prior to executing the file. PC-Pakratt-88 will reset the TBAUD parameter baud to its default value, reset the PAKRATT's internal clock and PC-Pakratt-88 will reset all the default parameters when you return from the external program.

An example of a batch file to call an external file transfer program is shown below.

```
CD \YAPP
YAPP
CD \PCRATT88
```

Remember to always return back to PC-Pakratt-88's directory before returning control to PC-Pakratt-88.

This feature has only been tested using the YAPP program. The YAPP configuration file should have the statement ^AOHON^W to place the PK/PCB-88 in normal human mode. It is best to place the PK/PCB-88 back in host mode before returning to PC-Pakratt-88, but this is not a necessary requirement.

Other programs may have different requirements.

11. Dumb Terminal Mode

The Dumb Terminal mode is very useful for entering commands which aren't available from the Host Mode interface. For instance, if you wish to adjust the PK/PCB-88's output audio level (as explained in the Operating Manual), you would need to use the Dumb Terminal mode to access the calibrate command.

Typing ESC will return you from the dumb terminal mode to the Communications Menu. Similarly, you can return to the Communications Menu by clicking the left mouse button on the message "Esc to Exit" found in the Status Line.

Clicking the right mouse button will cause the Help Screen to be displayed. This is the same as typing ALT-H.

| Dumb Terminal Help Screen | | <ESC> | <Back> | <Contents> |
|-------------------------------------|--|---------------------------------------|--------|------------|
| Function Keys | | Alt Keys | | |
| <F1>.....Open/Close Log File | | <ALT-B>.....Send a Break | | |
| <Shift F1>...Start/Stop File Upload | | <ALT-C>.....Clear Rx Window | | |
| <CTRL F1>....View A File | | <ALT-M>.....Define Keyboard Macros | | |
| <ALT F1>.....Hold/Release Log File | | Alt-1.thru 0..Execute Keyboard | | |
| <SHIFT F2>...Open/Close Printer | | | | |
| <ALT F2>.....Hold/Release Printer | | ESC.....Return to Communications Menu | | |

To execute any of these functions, press the respective function key. You can also select any function by pointing the mouse cursor and clicking the left mouse button.

Note: You can not click on "ESC... Return to Communications Menu" since the ESC key exits this menu. This item in the help screen is inactive.

The ALT-B key sends a break to the PK-88. Use ALT-B to 'unlock' the PK/PCB-88 if it does not respond to commands.

When capturing incoming data or uploading a file, the words CAPTURE and/or UPLOAD will appear in the Status Line on the top of the

screen. The storing of data to the capture file can be suspended and released using the ALT-F1 key. When printing (Shift-F2), the word PRN will appear in the Status Line. ALT-F2 will hold/unhold the data flow to the printer.

As the internal ROM of the PK/PCB-88 is updated, various new commands are added to the command set that may not yet be available through the Setup Screens of PC-Pakratt-88. These commands can be issued in the Dumb Terminal Mode. These changes will remain in effect until changed again or until the PK/PCB-88 is issued a RESET command.

12. PK-EDIT

PK-EDIT is an editor/word processor that is included with PC-Pakratt-88. It is designed to be efficient and easy to use, as most files you edit will not require complex operations.

If you have a word processor or editor you like, you may use it instead of PK-EDIT, as long as your program and PC-Pakratt-88 can both fit into memory at once. PC-Pakratt-88 occupies approximately 300K of RAM when it is active.

The default editor is PK-EDIT, and it can be invoked by selecting "Call Editor" from the Communications Menu, or by pressing ALT-E from the Packet mode screen.

When you invoke the CALL EDITOR function, the following menu will appear:

```
Specify File to Edit
Msg 1->
Msg 2->
Msg 3->
Msg 4->
Msg 5->
Notel->
Note2->
File
.ESC
```

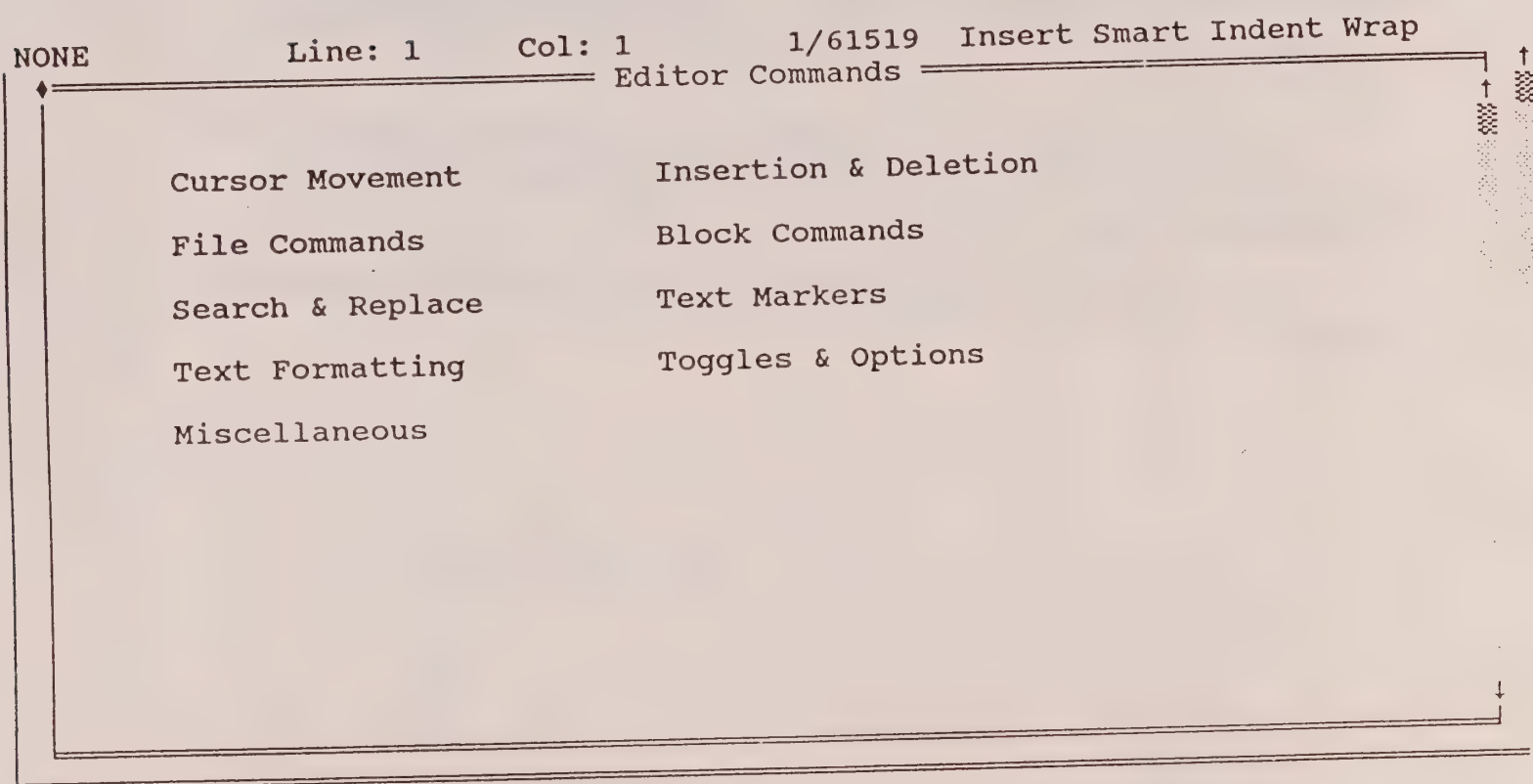
If you want to create a new file, select "File". The message files are used for quick sending of a "canned" message during a packet contact. To edit a message file, select the desired message file number.

When PKEDIT comes up, you will see a status line at the top of the screen:

This line shows file name, column and line number, file size/maximum file size, whether tabs are fixed or smart, whether insert is on or off (when the word INSERT is visible, insert is on) and whether automatic indent is enabled.

To insert text, just begin typing. Many of the editing commands are similar to the ones used in Wordstar™.

Pressing F1 brings up the following help menu:



From this menu, you can get help on any of the topics listed.

Most of the Help screen information is self-explanatory, so it won't be covered in detail in this manual. However, the Block Commands are quite useful and therefore demand a more in-depth explanation.

Block Commands refer to commands used after a *block* of text has been selected. These commands affect only the text within the selected block. This differs from normal editing operation in that commands normally used affect only the immediate cursor position.

A text block can be any length, from one character to the entire document. Usually, it is some amount in between these two extremes. To define a block, move to the beginning of the text you wish to block, and press CTRL-K followed by B (for beginning). A marker will show up on the screen indicating you have marked the beginning of the block. Similarly, press CTRL-K followed by K to mark the end of the block. Once you have

done this, the block of text will become hi-lighted, and it is now ready to have a command executed.

Some of the things you can do are:

- move the entire text block by moving the cursor to a new location and press CTRL-K followed by V
- copy the block by moving the cursor to a new location and pressing CTRL-K followed by C
- delete the block by pressing CTRL-K followed by Y
- write the block to a new file by pressing CTRL-K followed by W, then specifying the new file name

The last example is particularly useful when editing a message or traffic file in which you would like to send part of that file on to another station. You can select the part you want to send, write it to a new file and send that file without corrupting the original.

To save your current file and exit the editor, press CTRL-K followed by X.

13. General Information

Message and Note Files

PC-Pakratt-88 supports 5 message files and 2 note files. The message files are named PKMES.1 thru PKMES.5. The note files are called PKNOTE.1 and PKNOTE.2. Message files can be used to store such things as station equipment listings or any miscellaneous messages that are sent frequently. They can be sent to other stations by using PC-Pakratt-88's upload feature (shift-F1) discussed in Section 9.1.

Note files are used to store information, notes, frequency lists and other miscellaneous information. These files may be referred to at any time. The Note and Message files must be in the same subdirectory as PC-Pakratt-88. These files can be viewed by the File Viewing function (Ctrl-F1).

Viewing Files

While in the Packet mode, you have the ability to view a file by pressing the Ctrl-F1 key. You will first be shown a menu of possible files to view.

| Specify File to View | |
|----------------------|--|
| Msg 1-> | |
| Msg 2-> | |
| Msg 3-> | |
| Msg 4-> | |
| Msg 5-> | |
| Note1-> | |
| Note2-> | |
| File | |
| .ESC | |

You can even view a capture file that is presently open. The view routine cannot display files which have more than 8196 lines. An Error Message will be displayed stating that the file is too big. Lines which are greater than 80 characters in length will wrapped around on the next line. Control characters will displayed as ASCII, including tabs. Line feeds and carriage returns are not displayed.

The top line on the screen will be the Status Line and the remaining 24 lines will be the text window. If you selected the 43 line option when starting PC-Pakratt-88 then the remaining 42 lines will be the text window. The colors of the file and Status Window can be changed from the Screen

Colors Menu discussed in Section 8.1. The line number shown in the Status Window is the number of the line at the top of the window. The name of the file is also shown on the Status Line.

The PgDn and PgUp keys page up or down through the file. The up and down cursor keys can be used to step up or down one line at a time through the file. The Home key goes to the beginning of the file and the End key jumps to the end of the file.

The F1 key allows you to jump to any line in the buffer. You will be prompted for the line number to jump to. The line you specified will be displayed at the top of the window if possible. PC-Pakratt-88 will not let you display past the end of the buffer and PC-Pakratt-88 will attempt to fill the window with text. If you try to jump to the last line in the buffer, PC-Pakratt-88 will display the last page of the buffer since it cannot place the last line in the buffer at the top of the window. If the number of lines in the buffer is less than the buffer window, the remaining lines will be filled with blanks.

When you press the F3 key, the Search Menu will be displayed.

| |
|-----------------|
| Search String |
| Search Next |
| Search Previous |
| .ESC |

To search for text in the file, you must first specify what to search for. When you choose "Search String", you will be prompted for a text string. The search is case sensitive, lower case letters will not match will upper-case letters and visa versa. To begin the search choose either "Search Forward" or "Search Back". If a match is found, the line containing the matching string will be displayed at the top of the window if possible. If no match is found, an Error Window will appear stating so.

If you have a mouse, you can click on any of the commands in the Status Window to execute them. For example, clicking the left button on "PgUp" will execute a page up. Likewise, if you click on "Search", the Search Menu will appear.

Press ESC to return to the Operating Screen. You can also click the left mouse button on the word ESC.

Editing a File

The Note, Capture, and Message files can be edited with any ASCII text editor. They can be edited by using the Call Editor function from within PC-Pakratt-88. When editing a file, you will first be shown a menu of possible files to edit. The menu is the same as the one above for viewing a file. You may specify your own editor or word processor if you wish. See chapter 12, PK-EDIT.

```
Specify File to Edit
Msg 1->
Msg 2->
Msg 3->
Msg 4->
Msg 5->
Note1->
Note2->
File
.ESC
```

Be sure that the files are saved in ASCII text format; otherwise you may see "gibberish" characters. What you get depends upon the default storage mode of your word processor. Some word processors do not store their files in ASCII text format and insert control characters into the text.

Shelling to DOS

It is recommended that DOS 3.x be used because of a bug in DOS 2.1 that may cause the system to crash if the DOS SHELL function is called. PC-Pakratt-88 uses this function to call DOS.

While in DOS, a few words of caution are noteworthy. Do not start up any TSR (like Sidekick). First, they will disappear after PC-Pakratt-88 exits. Second, they could interfere with PC-Pakratt-88's operation. TSRs should be loaded before executing PC-Pakratt-88. Do not run programs that modify the serial port you are using for PC-Pakratt-88. This includes running other terminal programs or the DOS MODE command. PC-Pakratt-88 will abort with a Link Error if any of the serial port parameters have been modified.

Because PC-Pakratt-88 is still resident, the amount of memory available to run other programs is limited. Some programs may not be able to run because of the memory constraints. As more lines are added to the Scroll Back Buffer, the amount of available memory will decrease. You may have to clear the Scroll Back Buffer to free some memory.

PC-Pakratt-88 will modify the command prompt so that the DOS prompt will now contain the message "Type EXIT To Return To PC-Pakratt-88". As the message states, type EXIT to return back to PC-Pakratt-88. Remember to return back to the directory in which you first executed PC-Pakratt-88 or PC-Pakratt-88 may not find the files it needs to operate (like default files and macro file(s)).

14. OS/2 Operation

PC-Pakratt-88 runs under the DOS compatibility box of OS/2. The command SETCOM40 is not necessary because PC-Pakratt-88 does not use INTERRUPT 14 to communicate with the serial port. Instead, PC-Pakratt-88 has it's own interrupt routines which use INTERRUPTS 3 and 4. This seems to affect the OS/2 com port driver and causes it to not function after PC-Pakratt-88 is run. If the serial port is to be accessed after running PC-Pakratt-88 by OS/2 programs, most likely the computer will have to be re-booted. DOS programs running under OS/2's DOS box don't seem to care.

One problem has been noted in the OS/2 environment. Characters are sometimes received with a Frame Error or lost completely. The erroneous characters are mapped to a "!". Reducing TBAUD to 4800 or 2400 usually takes care of this problem. This can be done from the PC-Pakratt-88 Parameters Menu or using the -B command line switch.

15. Error Messages

The following is a list of possible Error Messages returned by PC-Pakratt-88 or the PK/PCB-88. Most Error Messages will be displayed in a pop up window on your screen. Hitting a key will allow the program to continue. Errors such as Link Error and Run Time Error are fatal and will cause PC-Pakratt-88 to abort.

Link Error.... A response to a command or data is expected back from the PK/PCB-88 and was not received. If all else fails, power off the PK-88, check connections and restart the PK/PCB-88 and PC-Pakratt-88. This could be an indication of RF getting into the computer or the PK/PCB-88.

BAD... The PK/PCB-88 did not understand the parameter supplied to a particular command.

Too Many... Too many call signs were specified.

Not Enough... Not enough information was given to the PK/PCB-88 with that particular command.

Too Long... The length of the text string was too long.

Range... The value specified was out of range for that command.

Callsign... Bad or missing call sign.

Unknown Command... PC-Pakratt-88 attempted to set a parameter that is not available with the ROM set in your PK/PCB-88. Either disable this error message from the PC-Pakratt-88 Defaults Menu or upgrade your PK/PCB-88 firmware.

Need Via... Path not properly specified to Packet connect/beacon

Not While Connected... The parameter cannot be changed while the PK/PCB-88 is connected to another station.

Need MYCALL... MYCALL has not been specified.

Already Connected... You are already connected to that station.

Not While Disconnected... That command cannot be issued while disconnected.

Different Connectees... You tried to connect to more than 1 station on the same logical channel

Too Many Packets Outstanding... Indication of a link problem.

Clock Not Set... Call AEA's Customer Service department.

Message Not Found... Either there are no maildrop messages to list or read or the message number specified does not exist.

No Free Memory... There is no free RAM available in the PK/PCB-88 to store any more messages.

Run Time ERROR -- NULL Pointer... The program ran out of heap space, usually an indication of a serious software error. Report Error and Conditions.

Not Enough Memory to Execute Editor... Not enough system memory to run both PC-Pakratt-88 and your editor. Maybe too many TSRs (Terminate & Stay resident programs such as SIDEKICK). Your editor may require too much memory.

File is not an Executable File... The filename specified as the editor is not an .EXE, .COM or .BAT file. The file also may not be a valid DOS executable file.

MODEFLAG is invalid... Program error. Report Error and Conditions.

Argument list exceeds 128 bytes... Program error. Report Error and Conditions.

File or path not found... The filename specified as the editor was not found and/or the path specified does not exist

Match Not Found !... No match to the specified search string could be found.

16. Link Messages

The following are messages returned by the PK/PCB-88 and are not necessarily catastrophic. These messages will be displayed in the Receive Window of the Communications Screen.

- Connected to Callsign
- Callsign busy
- FRMR sent: xx yy zz
- FRMR rcvd: xx yy zzz
- Retry count exceeded
- DISCONNECTED : Callsign
- LINK OUT OF ORDER, possible data loss

See the PK-88 or PCB-88 Operating Manual for more information on link messages.

Appendix A

List of Packet Status Numbers

The following is a list of the Packet status numbers shown in the Status Window during Packet operation. The number follows the letters S: on the bottom line of the Status Window.

- | | |
|----|---|
| 1 | Disconnected |
| 2 | Link Setup |
| 3 | Frame Reject |
| 4 | Disconnect Request |
| 5 | Information Transfer |
| 6 | REJ Frame Sent |
| 7 | Waiting Acknowledgement |
| 8 | Device Busy |
| 9 | Remote Device Busy |
| 10 | Both Devices Busy |
| 11 | Waiting Acknowledgement and Device Busy |
| 12 | Waiting Acknowledgement and Remote Busy |
| 13 | Waiting Acknowledgement and Both Devices Busy |
| 14 | REJ Sent and Device Busy |
| 15 | REJ Sent and Remote Busy |
| 16 | REJ Sent and Both Devices Busy |

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